BIOSOLIDS EMS MANUAL
ELEMENT 11.0
EMERGENCY PREPAREDNESS & RESPONSE

REVISION	EFFECTIVE DATE	APPROVAL SIGNATURE
08	08/03/2016	

PURPOSE

The purpose of this procedure is to ensure that the organization systematically establishes, implements and maintains the necessary operational control procedures, work instructions and other management controls to ensure it is meeting and exceeding the overall requirements of its biosolids management policy, voluntarily adopting requirements for biosolids quality, and public acceptance and progress toward improvement goals and objectives is being achieved.

SCOPE

This procedure applies to all the organization's biosolids management activities at all critical control points throughout the biosolids value chain that are under the organization's direct control or influence.

KEY WORDS

- Emergency Preparedness
- Emergency Response
- EMS Management Team

RESPONSIBILITY

The implementation of the emergency preparedness and response procedure is the responsibility of Assistant Director (Water Reclamation and Reuse), Water Systems Superintendent, Asst. Water Systems Superintendents (Operations and Maintenance), and Village Creek Training Specialist.

PROCEDURE

Emergency Management Plan (EMP)

The City of Fort Worth has in place a detailed Emergency Management Plan (EMP) that addresses different emergencies. The City continually updates and trains its employees to implement the plan with classroom workshops and drills. The City's EMP plan is coordinated among its different departments through the Emergency Management Office (EMO) of the Fire Department.

Risk Management Plan (RMP)–(2009)

The City of Fort Worth Water Department has in place a detailed facility risk management program. The RMP includes:

- Accidental Release Prevention Program (ARP Program) Management System
- Accidental Release Prevention Program Manual
- Offsite Consequence Analysis
- Hazard Review Report
- Chemical Spill Response Plan
- Emergency Response Plan – (for all Water Dept. Facilities)
- Village Creek WRF Emergency Response Procedures

Emergency Operations and Response Plan (EORP)—(2011)

As part of the City's overall EMP plan, the Water Department has an Emergency Operations and Response Plan (EORP) in place to address emergencies specific to the department including the activities within the biosolids

value chain. The EORP establishes the guidance for preparedness and response to emergencies and contingencies involving the water treatment and wastewater treatment facilities. It defines the roles and responsibilities of the Emergency Response Team, to maintain the capability to respond to and to mitigate the effects of hazards associated with emergencies; to determine response requirements based on emergency action levels; to direct proactive actions for staff; identify emergency equipment, to notify local response agencies and customers; to protect the public; and to limit impacts to the environment. Village Creek Water Reclamation Facility Emergency Response Procedures are included in the EORP in, Appendix 13 - FWWD SOPs – (A13-3)

Village Creek Water Reclamation Facility
Emergency Response Procedures
The Village Creek Water Reclamation Facility has detailed emergency response procedures (SOPs) which are a part of the RMP and EORP. These procedures provide detailed information and maps with regards to:

- Plant Evacuation – due to Chemical Leaks or Fire
- In-plant spills (hazardous materials and process sludges)
- Chemical Leaks
- Fire
- Severe Weather
- Notification of Authorities
- Chain of Authority (Contact Information)
- Emergency Equipment List
- Assembly Sites
- Chlorine Emergency Response Team
- Training requirements

VCWRF personnel are trained to prevent and to react to emergencies within the plant as well as wastewater related emergencies outside the plant. They coordinate their response with other City Departments, such as the Environmental Services Division of Transportation and Public Works, Police Department, Fire Department, state agencies including TxDOT and TCEQ, federal agencies, contractors, and other impacted organizations.

Location
The VCWRF Emergency Response Procedures (controlled copy) and copies of the RMP and EORP are maintained in the VCWRF Administration Library and Pretreatment Services Division. Additional copies of the VCWRF Emergency Response Procedures are distributed around the plant and to the Contractor.

Review
Each Emergency Management Plan and contacts are regularly reviewed and updated. Each departmental management team is responsible for plan updates and assigning people to the contact list.

Training
The City's employees are trained to respond to situations ranging from the smallest non-hazardous spills to terrorist attacks, floods, tornados, and fires. Village Creek personnel are required annually to attend training on Plant evacuation, caused by chemical leaks or fire.

Plant Security
As part of its Emergency Management Plan, the City has incorporated a security detail to protect its plants and operations from physical attack. The Water Department has established procedures to correspond to alerts issued by the United States Homeland Security Advisory System. In addition, the Water Department has established

"Procedures for Security Guards at Water Plants". This document outlines the roles and responsibilities of the Water Department Security Guards.

Contractor Emergency Response Plans

The City also requires its contractors to have Emergency Response Plans. These requirements are outlined in the Technical Specifications section of the contract documents for specific projects. By contract, it is implied the Contractor is required to provide qualified personnel with the proper training to execute these plans and to coordinate emergency response actions with the City. The Contractor's Emergency Action Plans are also listed in the table below.

Spills

Spills are one of the most common emergency situations encountered in the biosolids process. The City and its contractors believe that prevention is the best response to spills. Despite the preventive measures some spills still happen. These can be categorized by the location at which they occur in the biosolids process: spills in the collection system, spills with the treatment processes, and spills during biosolids transport.

Overflows

- **Spills in the Collection System**

  The Field Operations Division has indicated that approximately 65% of all sanitary sewer overflows are caused by grease blockage. The Pretreatment Services Division has implemented the Waste Hauler and Restaurant Program to address this problem. This program incorporates public education, compliance scheduling, waste hauler permitting, waste manifesting and tracking system, and interdepartmental and intradepartmental cooperation to reduce grease discharges at the source.

  The Pretreatment Services Division also requires each Significant Industrial Users to prepare accidental discharge plans for their operations as part of their permit. The plans are intended to limit the extent of possible damage due to accidental discharge.

  When a spill does occur the Pretreatment Services Division and/or Field Operations:

  1. Enacts its Spill Response Plan/Wastewater Procedures Manual.
  2. Coordinates response activities with the Environmental Services Division of TPW, the Field Operations Division, Village Creek Water Reclamation Facility, TCEQ, and other concerned departments, organizations, and individuals.
  3. Investigate and document the spill.
  4. Take corrective action.

- **Spills within the Treatment Process**

  Village Creek WRF: VCWRF takes appropriate measures to prevent spills; however; when one occurs VCWRF personnel:

  1. Enact the appropriate Spill Response Plan (SOP PLT 06.01).
     a. General spills
     b. Oils
     c. Chemical Flocculants
     d. Chemical Oxidants
     e. Process Sludges

2. Coordinate response activities as appropriate with plant personnel, TCEQ, other regulatory agencies, other City departments, the contractor, and other affected individuals. For chemical spills this may include contacting the Fire Department to assist with clean-up. The clean-up for a process sludge spill involves routing the spill into the plant sewer system and flushing the area with water.
3. Investigate and document the spill.
4. Take corrective action.

- **Solids-Only Landfill (Biosolids Facility)**
  Renda Environmental contacts the City Biosolids EMS Manager to coordinate clean up (see Contractor SOP for more details). The Biosolids EMS Manager contacts any other regulatory organizations as required. Renda oversees and performs the cleanup using its own employees or contract employees depending on the type and severity of spill. Renda disposes of any spill material according to the governing regulations for the type of spill.

- **Spills During Biosolids Transport**
  The contractor is responsible for all spills during transport of the biosolids for land application. The contractor's "Spill Prevention, Control and Countermeasures Plan for Transportation of Biosolids" outlines the procedure. Renda Environmental Inc. (REI) maintains a copy of their Spill Prevention, Control and Countermeasures Plan For Transportation of Biosolids at their office in the Sludge Only Landfill and a contact list is maintained in each truck used for biosolids transport. Four different spill locations must be addressed for biosolids application. General descriptions and contacts for these locations follow.
  1. Spills within City of Fort Worth Right-of-Way – Renda Environmental contacts the City Biosolids EMS Manager. The Biosolids EMS Manager contacts the Transportation and Public Works-Environmental Services Division if the type of spill warrants as well as the Fort Worth Fire and Police Departments. The Fire Department supervises the cleanup procedure and Renda provides the necessary personnel to clean the spill. All spill material is disposed of according to the governing regulations for the type of spill.
  2. Spills within County Right-of-Way – Renda Environmental contacts the City Biosolids EMS Manager and the County Health Department. Renda provides the necessary personnel to clean the spill and disposes of the spill material according to the governing regulations for the type of spill.
  3. Spills within TxDOT Right-of-Way – Renda Environmental contacts the City Biosolids EMS Manager. The Biosolids EMS Manager contacts the City Regulatory/Environmental Coordinator who contacts the Texas Department of Transportation (TxDOT). TxDOT supervises the cleanup procedure and Renda provides the necessary personnel to clean the spill. All spill material is disposed of according to the governing regulations for the type of spill.

Incident Report

Following each spill and cleanup, the Contractor completes an Incident Report. An example of the "Incident Report" form is included at the end of this element. The City and the Contractor discuss the cause of the spill, the spill response, any measures that need to be taken to prevent similar spills and any other corrective actions that need to be taken. This is documented with correspondence between the City and Contractor and in the Biosolids Progress meeting minutes, when applicable.

REFERENCES

- BMP Guidance Manual, (NBP): http://ww.weftec.org/Biosolids/page.aspx?id=7733
- Code of Good Practice, (NBP): http://ww.weftec.org/Biosolids/page.aspx?id=7733
- Manual of Good Practice for Biosolids, (NBP): http://ww.weftec.org/Biosolids/page.aspx?id=7733
- Contractor SOP: "Spill Prevention, Control and Countermeasures Plan for Transportation of Biosolids"
- VCWRF SOPs

EMS Cross References:

- Element 4.0 Legal and Other Requirements
- Element 7.0 Roles and Responsibilities
- Element 8.0 Training
- Element 9.0 Communication and Public Outreach
- Element 12.0 Documentation and Document Control
- Element 14.0 Nonconformance: Preventative and Corrective Action

ATTACHMENTS

Renda Incident Report

REVISION HISTORY

Revision #	Date	Revision Description
08	08/03/2016	Merged element to new format
07	08/05/2013	Updated references, added attachments list
06	07/29/2011	Update based on changes to Emergency Response SOP, correct typographical errors and update dates
05	05/15/2008	Audit (YR2) 2007
04	06/09/2007	Audit (YR1) 2006
03	05/26/2005	3rd Party Audit Phase I Revisions
02	11/29/2004	2004 Issue
01	10/01/2004	Approval Draft
SR	01/30/2004	Issued for Status Review

DOCUMENT	EMERGENCY/DESCRIPTION	DEPARTMENT/DIVISION	AREA(S) OF INFLUENCE WITHIN BIOSOLIDS VALUE CHAIN
City of Fort Worth **Emergency Management Plan (EMP)**	Operating Procedures and Emergency Response Plans for all City related activities.	City Wide All Departments	• Wastewater Pretreatment and Collection • Wastewater Treatment and Solids Generation • Solids Stabilization, Conditioning and Handling • Solids Storage and Transportation • Biosolids Use and Disposal
Security Guard Procedures at Water Plants	Operating Procedures for Security Guards	Water Department	• Wastewater Treatment and Solids Generation • Solids Stabilization, Conditioning and Handling
Fort Worth Water Department **Emergency Operations and Response Plan (EORP)** • Evacuation Plan • Vulnerability Analysis • Emergency Numbers • Duty Supervisor • Emergency Equipment Inventory • Critical System Records • Industrial Waste Inventory and Monitoring System • Emergency Operations Organizations • Emergency Response Center Mutual Air Agreements • Emergency Training • Bench Reference • Priority Checklist	• Personal Injury, Hazardous Gas Leak, Explosion or Other Catastrophic Event • Fire or Explosion • Chlorine Leak • Power Loss • High River Level (Flood) • Tornado • Civil Disorders • Military Attack • Personnel Abuse • Blocked Access • Communication Loss • Equipment Failure • Process Failure • Unusual Raw Wastewater • In-Plant Spills • City Water Loss • Service Water Loss • Hot Water Loss • Blizzard or Ice Storm • Earthquake	Wastewater Treatment Division - VCWRF	Wastewater Pretreatment & Collections
		Pretreatment Services Division	• Wastewater Treatment & Solids Generation • Solids Stabilization, Conditioning and Handling • Solids Storage and Transportation
		Wastewater Treatment Division - VCWRF	• Wastewater Pretreatment & Collections • Wastewater Treatment & Solids Generation • Solids Stabilization, Conditioning and Handling • Solids Storage and Transportation
Village Creek Wastewater Water Reclamation Facility **Comprehensive Vulnerability Assessment** Required in 2002 by public law (PL 107-188). Ft. Worth conducted vulnerability assessment on Wastewater Plant as well as all Water Plants.	All areas of the VCWRF	Wastewater Treatment Division - VCWRF	• Wastewater Treatment and Solids Generation • Solids Stabilization, Conditioning and Handling

DOCUMENT	EMERGENCY/DESCRIPTION	DEPARTMENT/DIVISION	AREA(S) OF INFLUENCE WITHIN BIOSOLIDS VALUE CHAIN
Wastewater Procedures Manual	• Backup and Flooded Buildings • Manhole Overflows and Run-Outs • Stops, Bad Odors, and Vermin	Field Operations	Wastewater Collections
Significant Industrial User ***"Accidental Discharge Plans"***	• Untreated Wastewater Discharges and Spills from • permitted Industry and Factories	Pretreatment Services Division	Wastewater Pretreatment and Collections
SP001 – Emergency Evacuation and Terrorism Incident Plan	• Centralized Water and Wastewater Laboratory • Evacuation • Fire • Tornadoes • Bomb Threats • Terrorism Incidents	Central Laboratory (City)	Central Laboratory and All areas
SP002 – Chemical Hygiene Plan	Laboratory Exposure to Hazardous Chemicals	Central Laboratory (City)	Central Laboratory and All areas
SOP 06.01—In-Plant Spills	Response to spills of hazardous materials and process sludges	VCWRF	• Wastewater Treatment and Solids Generation • Solids Stabilization, Conditioning and Handling
Contractor - **Emergency Action Plan** a. Emergency Evacuation Plan b. Spill Prevention Plan c. Severe Weather & Tornado Plan d. Contingency Plan for Flooding e. Back-up Plan for Loss of Power	• Biosolids Spill • Safety Precautions and Programs Associated with Beneficial Use of Biosolids • Trinity River Floods • Mechanical Failures Electrical Failure-(Emergency Generator)	Contractor: Renda Environmental	• Solids Conditioning & Handling • Solids Storage and Transportation • Land Application Dewatering/Processing sludge
Environmental and Transportation Safety Procedures	Safety Procedures for Handling Biosolids and General Transportation (Contr. SOPs)	Contractor: Renda Environmental	• Solids Conditioning & Handling • Solids Storage and Transportation • Land Application
Spill Prevention, Control, and Countermeasures Plan for Transportation of Biosolids	Biosolids and Oil Spill Prevention and Response (Contr. SOPs)	Contractor: Renda Environmental	• Solids Conditioning & Handling • Solids Storage and Transportation • Land Application

RENDA ENVIRONMENTAL

Incident Report

(This report must be completed within 24 hours. Contact the Operations Manager immediately after the incident.)

Incident type: *(check more than one if necessary)*	☐ Non-injury ☐ Injury ☐ Close Call ☐ Accident ☐ Theft ☐ Equipment Damage ☐ Vehicle Damage ☐ Utility Cut

1. ***INCIDENT REPORT IS TO BE COMPLETED BY THE SUPERVISOR***

Print Name of Person involved: _____ Sex: M or F

Social Security No: _____ DOB: _____

Occupation: _____ Does the employee speak English? Y or N

Date of incident: _____ Time: _____ Supervisor: _____

Date when employee reported incident to supervisor: _____ Date reported to HR: _____

Job Address: _____ Incident Location: (where incident occurred) _____ Job No.: _____

Detailed description of incident: _____

Were photos taken of damage? Y or N

Was employee performing regular job duties when incident occurred? Y or N

Equipment/Tools/Vehicle involved: _____ I.D. # _____

Utility Damage: Y or N Type: _____
(Example: Water, Gas, Electric, etc.)

Nature of Injury: _____ Part of Body Injured or Affected: _____
(Example: Strain, Cut, Broken arm)

What was the employee doing just before the incident occurred?
(Example: "climbing ladder while carrying roofing materials," "laying pipe in trench" or "spraying paint from hand sprayer")

Treatment: First Aid (on site) _____ Medical (doctor) _____ Date of doctor visit: _____

Time of Dr. visit? _____ Did employee return to work? Y or N Date: _____

Name of supervisor/foreman who transported employee to clinic? _____

The name of facility where treatment was provided: _____

*Refusal of Medical Treatment: Y or N If refusing medical treatment, explain:_____

*Although an employee refuses medical treatment our policy states, "A drug and alcohol screen will be administered following an on-the-job injury requiring treatment from a physician, **or** following an accident or incident, including near misses." Therefore, a DRUG & ALCOHOL TEST MUST be administered. A supervisor or foreman shall transport the employee to the clinic for the post-accident screening. Please contact Terry immediately or the HR Office if Terry is not available.

This section to be completed by employee

Employee statement: _____

☐ Check here if statement is on a separate form.

Employee's signature: _____ Date: _____

This section to be completed by Witness

Statement: _____

Witness signature: _____ Date: _____

If not an employee, please provide contact phone number: _____

Use a separate sheet if more than one witness.

Supervisor's statement: _____

Corrective action taken to prevent future occurrences (completed by supervisor):

Supervisor's signature: _____ Date: _____

Print your name: _____

I agree with the Incident Report and will follow the corrective action as stated above:

Employee signature: _____ Date: _____

- **Incident reports must be turned in to HR office within 24 hours of incident**
- **Contact the Operations Manager immediately after incident and contact Human Resources immediately for medical authorization if the Operations Manager is not available**
- **Operations Manager is also available during pm hours and/or weekends**

Human Resources Office: (817) 491-2703 (between the hours 7:30 am - 4 pm)
Leonardo Ramirez: (817) 538-6459 (after 4 pm and/or weekends or when HR is not available)
Forward Incident Report to the confidential HR Fax: (817) 491-7240